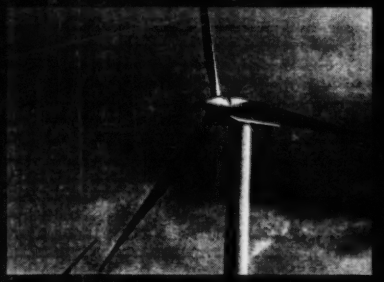
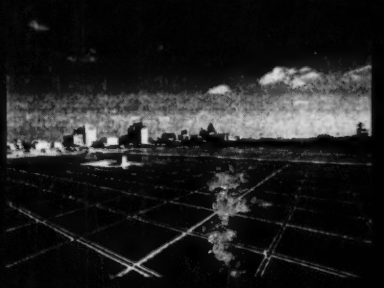
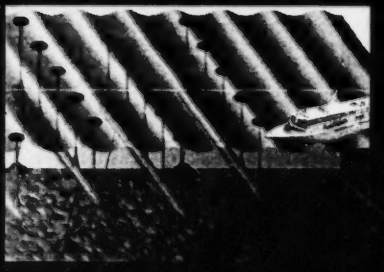
ALTERNATIVE ENERGY AND POWER TECHNOLOGY: A STRATEGY FOR BC

Growing the Economy by Providing Alternative Energy and Environmental Solutions for Domestic and International Customers







BRITISH COLUMBIA

OVERVIEW

Alternative energy and power technology refers to any technology or service that allows us to be more innovative about how we create, deliver and use energy resources. It offers B.C. an enormous opportunity for economic development.

The alternative energy and power technology actions identified in this Strategy will grow B.C.'s economy. They will also provide remarkable environmental and social benefits for people in B.C. and around the world. The Strategy builds on B.C.'s status as a clean energy provider and its reputation as an energy innovator, to position B.C. as the place international customers turn to for energy and environmental solutions.

The Strategy delivers on government's Throne Speech commitment to promote alternative energy in wind, tidal, solar and run-of-the-river power projects. It responds to the vision presented by the Premier's Technology Council in its report *A Vision for Growing a World-Class Power Technology Cluster in a Smart Sustainable British Columbia* which explores economic opportunities to be found across the power supply, delivery, and end-use value chain.

The Task Force on Alternative Energy and Power Technology will provide detailed advice to government on how best to implement and resource the Strategy.

VISION

Where we want to be in 10 years

The Premier's Technology Council provides the ten-year vision for this Strategy:

In its report, the Council argues B.C. can be a world leader in alternative energy and power technology. It says government and industry can together create high-value jobs in profitable businesses that supply sustainable power solutions to B.C., Canada and the world. Industries and companies that adopt sustainable power solutions will become leaders in sustainable business practices, and become more efficient and more competitive.

The Council believes B.C. is poised on the edge of the next big market growth opportunity. Worldwide, the power technology industry is a 'sleeping giant' with a total market size today of more than CAN$200B. Even market niches represent hundreds of millions of dollars in projected annual revenue growth over the next decade as the world's power systems are enhanced and modernized.

It says the power technology industry in B.C. is already one of the biggest technology industries comprising more than 60 companies who employ more than 3,000 people worldwide and generate in excess of CAN$700 million in revenue per year. B.C. has market leaders and emerging companies in a number of sustainable power technology areas including: power electronics; fuel cells; natural gas and electric hybrid engines; smart grid and power measurement; micro-hydro, ocean, solar, and wind energy; sustainable urban building and design practices; and more.

The Council concludes that we can more than triple our export revenues and bring thousands of new jobs to the

106-0 5651 /

region by deploying power technology solutions in B.C., and then selling them abroad — and at the same time secure our reputation as a clean, sustainable place to live and work.

A copy of the report is available at **www.gov.bc.ca/prem/popt/technology_council**.

STRATEGY

How we get there

To make B.C. a world leader in alternative energy and power technology, the Premier's Technology Council recommends a strategy that would solve relevant B.C. power issues, showcase the solutions, brand B.C. as a place where these solutions are used and available for export, and then realize B.C.'s export potential in Asia and other high growth global markets.

In 2002, the government released Energy For Our Future — a plan for fully realizing the potential of B.C.'s great energy resources (the Energy Plan).

To realize our alternative energy and power technology vision, we must build on the Premier's Technology Council work, and advance the goals of the Energy Plan.

Government and the private sector must work together. We must endorse the Council's recommendation to focus our energies on what the market needs ('market pull') rather than promote any particular technology ('technology push'). We must examine those market needs that are also pressing concerns for B.C. residents — concerns that the government must address in any event. We must look for areas where innovative B.C. businesses already have a competitive advantage; where the solution integrates technologies and services into products the world wants to buy.

Accordingly, the government will encourage the use and development of integrated solutions for the following five market opportunities — as identified by the Premier's Technology Council:

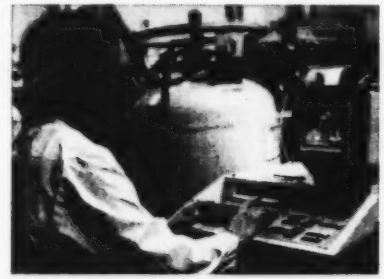
1. Remote power solutions for rural communities, including off-grid distributed generation from a variety of established and emerging alternative sources.
2. Sustainable urban practices, including building designs and urban planning to reduce energy consumption and grid-tied sustainable distributed power to help offset peak power needs.
3. Sustainable urban transport, including application of natural gas and electric hybrid engines, fuel cells and hydrogen – areas in which B.C. is already recognized as the global leader.
4. Sustainable grid solutions, including the use of software, hardware and electronics to increase the efficiency of power grids.
5. Large-scale clean power production to generate and deliver electricity to the western North American power market.

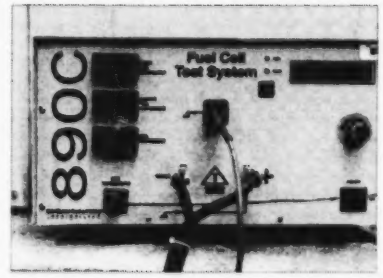
We must apply our integrated and innovative solutions in B.C. first, then showcase them to eager customers abroad.

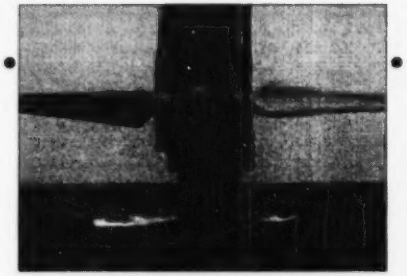
British Columbians take pride in our status as provider of clean, low cost, electricity and as an innovator — and we need to maintain that status as B.C. moves forward to find new energy supply to meet growing demand. And we must use B.C.'s status to brand B.C. and the region as the place international customers turn to for power technology and environmental solutions.

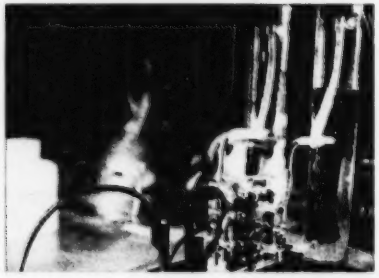
"B.C. has the people and the resources to help drive the global shift toward alternative energy and power technology as part of our goal of leading the world in sustainable environmental management. Innovative power technology developed here in B.C. is improving the quality of life for people around the world, by improving how power is generated, delivered and used. Demand for that expertise will only continue to grow."

Premier Gordon Campbell









BRITISH COLUMBIA

TASK FORCE

Premier Campbell has established the Alternative Energy and Power Technology Task Force and mandated the Task Force to report directly to Cabinet on how best to implement and resource the Alternative Energy and Power Technology Strategy.

In particular, the Task Force will:

- Provide advice on setting measurable goals so we know when we get there, and how to monitor our progress along the way;
- Recommend appropriate roles and actions for government;
- Recommend appropriate roles and actions for industry;
- Help build strategic partnerships (e.g. with the federal government, Vancouver 2010 Organizing Committee, Pacific Northwest Economic Region);
- Be consistent with the Energy Plan, and where necessary recommend enhancements; and
- Recommend any additional ideas the Task Force believes will help implement or resource the Strategy.

Government is ready to play an active role where appropriate and has asked the Task Force for its advice on the following specific steps government could make in concert with industry contributions:

- A 'solutions' fund to help provide integrated solutions in relation to the five key B.C. market opportunities identified above;
- To showcase B.C. alternative energy and power technology solutions as part of the 2010 Olympics and preceding events;
- To market B.C. solutions to the high-growth areas of the world to help create export opportunities;
- Any changes necessary to current regulatory frameworks for utilities in order to ensure access to secure, reliable, clean, and reasonably priced energy over the long term;
- A new regulatory framework for land use to avoid disconnected or fragmented approval processes; and
- An ambitious provincial procurement strategy, including an aggressive business case for the Province to obtain cost savings in its own capital and operating budgets by employing 'sustainable urban practices' and clean power technologies supplied by B.C. businesses.

The Task Force is co-chaired by:

- Mossadiq S. Umedaly, member of the Premier's Technology Council, author of the Council's report, and Chairman of Xantrex Technology Inc.; and
- Chilliwack-Kent MLA Barry Penner, who led the Province's opposition to the Sumas II project and has championed alternative energy as the government's representative to the Pacific Northwest Economic Region.

As it fulfills its mandate over the next twenty weeks, the Task Force will seek participation from industry, utilities, universities, communities, First Nations, non-governmental organizations, and others.

For more information contact:
Ministry of Energy and Mines
PO Box 9314 Stn Prov Govt, Victoria, B.C. V8W 9N1
tel: 250 952-0673
www.gov.bc.ca/em